0.00

0.00

QC8- Inspect parts - second check

Memo

120

QC

120

Quality Control

| NCD. | Voc | 1 | No |
|------|-----|---|-----|
| NCR: | Yes | / | INO |

DQA: Date:

| NCR: Ye | es / No | | | | WORK ORDER NON- | CONFO | RIMANCE / UP | | QA Closed: | Date | : |
|--|---------------------------------|--------------------|--|-------------|--|--|---|------------------|---|--------------|--|
| Work Order | • | | | | DISPOSITION | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part No. NCR No. | | | Rework Scrap Use-as-is Work Order Update | | Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite | | Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier | | Engineering Quality Other | | |
| NCN NC | · | · · · | | | Work Order Opdate | . | carge rab | composite | | | لــا لـ |
| Root Cause | Date | Step | Qty | | ption of work order update or Non-conformance | Initial Chief En | 1 | tion cription | Sign & Date | Verification | QC Inspector |
| Doc/Data Equip/Tooling Dperator Material | | ССС | | | | | 5 | | | | |
| Setup Other | | | | | | | | | | , | |
| Supplier Training Unapproved | | - | | | | | | | | | |
| • | | | | | F | AULT CAT | EGORY | | | | |
| Landing | Gear Bending | | | | General Bend | Grair | | | Ovalized | | Pressure/Forced |
| - | Centre No Cracks Crushed/ | | ntric to C | o/s | BOM/Route Broken/Damaged Burrs | — | vare ction Incomplete ctions Incomplete/ | 'Unclear | Over/Under Part Incorre Part Lost/M | ct | Temperature/Cure Weld Wrong Stock Pulled |
| - | Cuffs Heat Trea | it | Tube | | Contamination Countersink Cut Too Short | Main Misla Misre | | | Part Moved Positioned V Power Loss/ | _ | Other |
| 80 | Ripples in Torque W | Bend Javes in E | extrusion | , | Drill Holes Drawing | Offse Out o | t f Calibration | | | | |
| - | Turning S Wave/Tw | • | | - | Finish Folio | | f Sequence de Dimensions | | | | |

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Required Date: 5/31/13

Reference:

Approvals:

Sequence ID/

120 Packaging

Packaging

130

140

QC

Quality Control

Work Center ID

Req'd Qty: 30.00

Operation

Description

Identify as per dwg & Stock Location:

QC21- Final Inspection - Work Order Release

*****STOCK IN BASKET CELL*****

Memo

Memo

Accept

Tooling:

0.00

0.00

0.00

0.00

SPC (Y/N):

Set Up/

Run Hours

Date:

Date:_____

Setup Start *N900040100* **Cust Item ID: Customer:** Run Date: Stop Date: Reject **Tool ID** Tool # Plan Accept Reject Insp. Code Qty Qty Number Stamp

| | | | | | | | | | | DQA: | Date: | |
|--------------|--------|---|------|-----|--------|--------------------------------|-----------|---------------------|---------------------|------------|--------------------------|---------------------|
| NCR: Ye | es / N | 0 | | | | WORK ORDER NON-C | CONFOR | MANCE / UP | DATE | QA Closed: | Date: | |
| Nork Orde | - | | | , | | DISPOSITION | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part No | | | | | | Rework Scrap | 1 1 | Skid-tube Machining | Crosstube Small Fab | | Water Jet d. Eng. Coor. | Engineering Quality |
| NCR N | 0 | | | | | Use-as-is Work Order Update | Therr | noforming Large Fab | Finishing Composite | Kec/Sto | re/Packaging Supplier | Other |
| Root | | | | | Descri | ption of work order update | Initial | Ac | tion | Sign & | | |
| Cause | Dat | e | Step | Qty | (| or Non-conformance | Chief Eng | Desc | ription | Date | Verification | QC Inspector |
| oc/Data | | | | | | | | | | | | |
| quip/Tooling | | | | | | | | | | | · | |
| perator | | | | | | | | | | | | |
| /laterial | | | | | | | | | | | | |
| etup | | | | | , | | | 1 | | | | • |
| ther | | | | | | | | | | | | |
| rocess | | } | | | | | | | | | | |

| HUHITE | Geal | General | _ | | _ | | _ |
|--------|------------------------------|----------------|---------------------------------|---|----------------------|---|--------------------|
| | Bending | Bend | Grain | | Ovalized | | Pressure/Forced |
| | Centre Not Concentric to O/S | BOM/Route | Hardware | | Over/Under tolerance | | Temperature/Cure |
| | Cracks | Broken/Damaged | Inspection Incomplete | | Part Incorrect | L | Weld |
| | Crushed/Crimped | Burrs | Instructions Incomplete/Unclear | | Part Lost/Missing | L | Wrong Stock Pulled |
| | Cuffs | Contamination | Maintenance | L | Part Moved | | |
| | Heat Treat | Countersink | Mislabeled | | Positioned Wrong | _ | _ |
| | Inspection Strip in Tube | Cut Too Short | Misread | | Power Loss/Surge | L | Other |
| | Ripples in Bend | Drill Holes | Offset | | | | |
| | Torque Waves in Extrusion | Drawing | Out of Calibration | | | | · |
| | Turning Sequence | Finish | Out of Sequence | | | | |
| | Wave/Twist in Tube | Folio | Outside Dimensions | | | | |

FAULT CATEGORY

Supplier Training Unapproved

Picklist Print

May-13-13 1:14:31 PM

Work Order ID:

101800

Parent Item:

D2327-3

Parent Item Name:

Spacer Bushing

Start Date: 5/13/13

Required Date: 5/31/13

Start Qty: 30.00

Required Qty: 30.00

Comments:

IPP F05.11.02Removed 303 SSKJ/EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|------------------|
| M304R0.375 | | Purchased | No | | | 100 | f | 36.2500 | 0.1563 | 4.935789 | | | |
| 304 ROUND BAR 0.375 | | • | | | | | | | | | | | · <u>p·</u> •··· |

 Location
 Loc Oty
 Loc Code

 MAT029
 36.25

 125585
 36.25

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13.5 . 23 . 04

Page 1

| | | DQA: | Date: | |
|-----------------|--------------------------------------|------|-------|--|
| NCD. Voc. / No. | WORK ORDER NON CONFORMANCE / LIBRATE | | - | |

| NCR: Y | es / No | | | | WORK ORDER NON-C | JONE | OKI | MANCE / UP | DATE | QA Closed: | Dat | e: |
|---------------|-------------------|------------|-------------|--|-----------------------------|----------|-------------------|------------------------------------|------------|-----------------------|----------------|---------------------------------------|
| | | | | | DISPOSITION | T | | | AGAINST DE | | | · · · · · · · · · · · · · · · · · · · |
| Work Orde | er: | | | | Rework | 1 | | Skid-tube | Crosstube | [| Water Jet | Engineering |
| Part N | lo. | | | | Scrap | 1 | ľ | Machining | Small Fab | Pro | d. Eng. Coor. | Quality |
| | | | | | Use-as-is |] 1 | Therm | noforming | Finishing | Rec/Sto | re/Packaging | Other |
| NCR N | ło | | | | Work Order Update | | | Large Fab | Composite | | Supplier | |
| Root | | | | Descri | ption of work order update | Init | | | tion | Sign & | | |
| Cause | Date | Step | Qty | • | or Non-conformance | Chief | f Eng | Desc | ription | Date | Verification | QC Inspector |
| Doc/Data | | | | | | 1 | | | | | | |
| Equip/Tooling | | | | | | | | | | | | |
| Operator | | | | | | | | | | | | |
| Material | | | | | | | | | | | | į. |
| Setup | | | | | | | | | | | | |
| Other | | | | | V | | | | | | | |
| Process | | | | | • | | | | | | | |
| Supplier | | | | | | | | : | | | | |
| Training | | | | | | | | | | | | |
| Unapproved | | <u> </u> | <u> </u> | <u> </u> | | 1 | CATE | CODY | | | L | |
| | | | | | | AULT (| CATE | JURY | | | | |
| Landii | ng Gear | | | | General | | rain | | | Ovalized | Г | Pressure/Forced |
| | Bending | | | o.c. | Bend PON (Bounds | \vdash | rain ardwa | | | Ovanzed Over/Under | tolorance | Temperature/Cure |
| | Centre No | ot Conce | ntric to | ^{∪/s} - | BOM/Route Broken/Damaged | \vdash | | re on Incomplete | | Part Incorred | - - | Weld |
| | Cracks | Cuinan a d | | <u> </u> | Burrs | | | on incomplete/ ions Incomplete/ | Uncloar | Part Lost/Mi | - | Wrong Stock Pulled |
| | Crushed/ Cuffs | Crimpea | | <u> </u> | Contamination | - | | nance | Officieal | Part Moved | 133111B | |
| | Heat Trea | at | | | Countersink | \vdash | iainte Iislabe | | <u> </u> | Positioned V | Vrong | |
| | Inspectio | | Tube | - | Cut Too Short | \vdash | lisread | | | Power Loss/ | | Other |
| | Ripples in | | , ube | } | Drill Holes | \vdash | ffset | • | | 1. 011.0. 2033/ | | 10.101 |
| | Torque W | | Extrusio | ຸ ⊢ | Drawing | - | | Calibration | | | | |
| | Turning | | | " | Finish | \vdash | | equence | | | | |

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Folio

| DART AEROSPACE LTD | Work Order: | 101800 |
|------------------------------|--------------|-------------|
| Description: Spacer Bushing | Part Number: | D2327-3 |
| Inspection Dwg: D2327 Rev: D | | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

| X | First Article | | Prototype |
|---|---------------|--|-----------|
|---|---------------|--|-----------|

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|----------------------|---------------|---------------------|--------|--------|-------------------------|----------|
| `Ø0.375 | +/-0.010 | -375 | | | | |
| Ø0.257 | +0.005/-0.000 | 258 | | - | | |
| 1.750 | +/-0.010 | 1.750 | | | | |
| | | | | | | |
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| | 1 OAS | | | | | |

Measured by: Audited by: Audited by: Prototype Approval: N/A

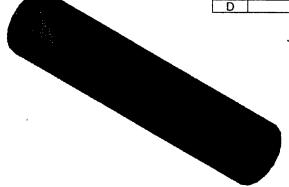
Date: (3)05|23 9-69 Date: N/A

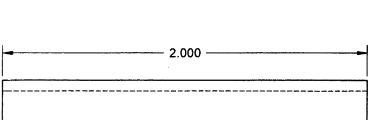
| Rev | Date | Change | Revised by | Approved |
|-----|----------|-----------------------------|------------|----------|
| Α | 04.01.13 | New Issue | KJ/RF | |
| В | 06.11.24 | Dwg Revision revised | KJ/JLM . | |
| С | 08.01.28 | Tolerance revised on Ø0.375 | KJ/EC/DD | 7 |

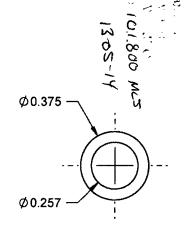


| DESIGN BW | DRAWN BY | DART AEROSPACE HAWKESBURY, ONTARIO, | |
|------------------|----------|-------------------------------------|------------------------|
| CHECKED | APPROVED | DRAWING NO. D2327 | REV. D SHEET 1 OF 1 |
| DATE 06 . | 10.12 | TITLE SPACER BUSHING | SCALE 2:1 |

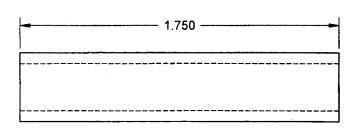
| | ł | | | |
|---|-----|----------|------------------------|--|
| _ | REV | DATE | DESCRIPTION | |
| | Α | 94.12.17 | NEW ISSUE | |
| | В | 95.12.06 | LENGTH CHANGE | |
| | C | 03.05.13 | 303 SS SPEC ADDED | |
| | D | 06 10 12 | REMOVE 303 SS MATERIAL | |

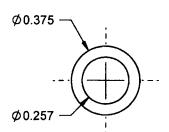






D2327-1 SPACER BUSHING





D2327-3 SPACER BUSHING

NOTES: 1) MATERIAL: AISI 304/316 SS, ϕ 0.375, 0.065 WALL SEAMLESS ROUND TUBING (REF. DART SPEC M304TR0.375W.065)



- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
 5) BREAK ALL SHARP CORNERS TO 0.010 MAX

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